

c.) Amendments to the Claims

Claims 1-47 (cancelled).

Claim 48. (currently amended) --The device for providing input to a touch screen of claim 47 105, wherein said means for detecting simultaneous operation includes multiple discrete band RF touch position determination means.

Claim 49. (currently amended) --The device for providing input to a touch screen of claim 47 105, wherein said means for detecting simultaneous operation includes multiple discrete wavelength IR touch position determination means.

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Claim 50. (currently amended) --The device for providing input to a touch screen of claim 47 105, wherein each of said multiple discrete bands of said touch determination means corresponds to one of said discrete frequency or wavelength bands of said plurality of means for generating touch signals.

Claim 51. (original) --The device for providing input to a touch screen of claim 50, wherein said multiple discrete band RF touch position determination means includes a plurality of multi-band RF transmitter/detector units disposed about the touch screen.

Claim 52. (original) --The device for providing input to a touch screen of claim 49, wherein said multiple discrete band IR touch position determination

means includes a plurality of multi-band IR transmitter/detector units disposed about the touch screen.

Claim 53 (cancelled).

Claim 54. (currently amended) --The device for providing input to a touch screen of claim ~~53~~ 106, wherein said plurality of discrete sensing areas are in contiguous arrangement within a single touch screen.

Claim 55. (original) --The device for providing input to a touch screen of claim 54, wherein each of said sensing areas is bordered by sensing electrodes that locate a touch within the respective sensing area.

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Claim 56. (original) -- The device for providing input to a touch screen of claim 54, wherein at least one of said plurality of devices is operable in a respective one of said sensing areas.

Claims 57-93 (cancelled).

Claim 94. (Re-presented formerly dependent claim 10) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;

wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;

power supply means in said fader cap for driving said touch signal generating means, said power supply means including a battery.

Claim 95. ((Re-presented formerly dependent claim 11) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;
wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;
power supply means in said fader cap for driving said touch signal generating means, said power supply means including a photovoltaic cell.

Claim 96. ((Re-presented formerly dependent claim 18) -- A device for providing input to a generally flat touch screen, including:

96 a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said means for securing including an adhesive layer formed on a bottom surface of said base member, said adhesive layer being preferentially more adherent to said base member than to the surface of a touch screen device.

Claim 97. ((Re-presented formerly dependent claim 19) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

wherein a plurality of said devices are provided, said plurality of devices being joined in a crack-and-peel sheet.

Claim 98. ((Re-presented formerly dependent claim 25) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including an RF power supply means driven by a battery.

Claim 99. ((Re-presented formerly dependent claim 26) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

further including a knob cap secured coaxially to said post and adapted for rotation about a common axis;

a stylus tip extending from said knob cap toward said touch screen;

said touch screen being adapted to detect the position of a touch signal applied thereto, said knob cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen;

power supply means in said knob cap for driving said touch signal generating means, said power supply means including a photovoltaic cell.

Claim 100 ((Re-presented formerly dependent claim 28)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including power supply means for operating said means for provoking a touch detection, said power supply means includes means for transmitting RF power wirelessly to said device.

Claim 101 ((Re-presented formerly dependent claim 29)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including power supply means for operating said means for provoking a touch detection, said power supply means includes means for transmitting IR power wirelessly to said device.

Claim 102 ((Re-presented formerly dependent claim 42)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs,

said software means providing a joystick controller emulation and interpreting a linear touch pattern at any angle from said center point as a

command to move a graphic at the same angle on the display, wherein the rate of movement of the graphic is set by said software means.

Claim 103. ((Re-presented formerly dependent claim 43) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs;

said software means providing a joystick controller emulation and interpreting a linear touch pattern at any angle from said center point as a command to move a graphic at the same angle on the display, wherein the rate of

movement of the graphic is proportional to the amount of time that a touch detection is maintained at any given angle.

Claim 104. ((Re-presented formerly dependent claim 44) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member comprising a post having a bottom surface adapted to impinge on the touch screen;

91 further including a computer having a graphic display associated with the touch screen, and software means for receiving touch input provoked by said post with fingertip pressure, said software means including means for analyzing touch inputs provoked by said post with fingertip pressure and emulating specific diverse controller characteristics in response to said touch inputs;

said software means including means for analyzing initial touch inputs provoked by said post with fingertip pressure and determining the center point of said initial touch inputs;

said software means providing a mouse controller emulation and interpreting a touch detection displaced from said center point at an angle thereabout as a command to move a cursor at the same angle on the display.

Claim 105 ((Re-presented formerly dependent claim 47)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including a plurality of said devices, said touch screen including means for detecting simultaneous operation of said plurality of devices;

each of said plurality of devices including means for generating a touch signal and transmitting said touch signal through a stylus tip to said touch screen.;

each means for generating a touch signal of each respective device operating within a respective discrete frequency or wavelength band.

Claim 106 ((Re-presented formerly dependent claim 53)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including a plurality of said devices, said touch screen including means for detecting simultaneous operation of said plurality of devices;

said touch screen including resistive touch detection means, and further includes a plurality of discrete sensing areas.

Claim 107 ((Re-presented formerly dependent claim 60)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

wherein said base member comprises a post having a bottom surface adapted to impinge on the touch screen, said post including a top surface having a cushion layer adhered thereto.

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Claim 108 ((Re-presented formerly dependent claim 69)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member defining a bottom opening, a control rod having a lower end with a stylus tip, and means for supporting said control rod on said base member with said stylus tip spaced closely to the touch screen to provoke a touch detection;

said means for supporting said control rod including a universal bearing engaging a medial portion of said control rod; and,

a membrane extending radially from said control rod to said base member, said membrane formed of an elastic, resilient web.

Claim 109 ((Re-presented formerly dependent claim 88)) -- A device for providing input to a generally flat touch screen having a peripheral edge, including:

a flexible track mounted at the peripheral edge of the touch screen, said flexible track being extendable along an axis extending inwardly on said screen;

means extending from said flexible track for provoking a touch detection by said touch screen; and,

means for detecting extension and retraction of said flexible track with respect to the peripheral edge of the touch screen and correlating the extension and retraction with a controller function;

wherein said means for detecting includes a spindle about which said flexible track is passed, and means for sensing rotation of said spindle and converting said rotational data into location coordinates of said cap end of said flexible track;

said spindle including radial teeth, and said flexible track includes a toothed surface adapted to engage said radial teeth.

Claim 110 ((Re-presented formerly dependent claim 89)) -- A device for providing input to a generally flat touch screen having a peripheral edge, including:

a flexible track mounted at the peripheral edge of the touch screen, said flexible track being extendable along an axis extending inwardly on said screen;

means extending from said flexible track for provoking a touch detection by said touch screen; and,

means for detecting extension and retraction of said flexible track with respect to the peripheral edge of the touch screen and correlating the extension and retraction with a controller function;

wherein said means for detecting includes a spindle about which said flexible track is passed, and means for sensing rotation of said spindle and converting said rotational data into location coordinates of said cap end of said flexible track;

further including motor means for driving said spindle to extend and retract said flexible track with respect to the peripheral edge of the touch screen.

Claim 111 ((Re-presented formerly dependent claim 92)) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

said base member including a longitudinally extending rib having a bottom surface adapted to impinge on the touch screen;

further including a fader cap, and means for securing said fader cap to said rib in longitudinally sliding fashion;

a stylus tip extending from said cap toward said touch screen;

wherein the touch screen is adapted to detect the position of a touch signal applied thereto, said fader cap including means for generating said touch signal and transmitting said touch signal through said stylus tip to said touch screen; further including power supply means in said fader cap for driving said touch signal generating means, said power supply means including a battery;

said fader cap including touch switch means for connecting said battery to said touch signal generator means in response to fingertip touch on said fader cap.

Claim 112 ((Re-presented formerly dependent claim 93) -- A device for providing input to a generally flat touch screen, including:

a base member and means for securing said base member to the touch screen;

means associated with said base member for provoking a touch detection by the touch screen;

further including an RF power supply means driven by a battery, and a knob cap having a touch switch for connecting said battery to a touch signal generator in response to fingertip touch on said knob cap.